GAMING SYSTEM

Field of the Invention

This invention relates to gaming systems, particularly but not exclusively to gaming systems where games are played by players (or punters as they are colloquially known) seeking monetary return.

One particularly preferred embodiment of the invention relates to a gaming system that can be implemented by means of an internet or other communications medium (hereafter referred to as a virtual gaming system). Another preferred embodiment relates to a gaming system which can be implemented as a real (as opposed to virtual) physical gaming console, such as an arcade machine for example.

Whilst the gaming systems of preferred embodiments are typically played in expectation of monetary return, the teachings of the invention may equally be applied to gaming systems which do not provide a monetary return but instead provide a return in the form of tokens, credits or prizes.

Background to the Invention

A variety of different gaming systems have previously been proposed. Of these different systems, the majority can be considered as implementing either "skill based" or "chance based" games.

In general terms, skill based games can be considered to be those which require an element of skill on the part of the punter. Action games for gaming consoles are a prime example of just such a game. Chance based games, on the other hand, can be considered to be those games in which the outcome is dependent on chance irrespective (or at least largely irrespective) of the skill possessed by the punter. Roulette is a prime example of a chance based game where the ball has an equal chance of falling into any of the slots in the roulette wheel, and as such the outcome of the game is independent of the skill of the punter.

It will be appreciated that in most chance based games, there is nevertheless an element of skill (usually acquired by experience) associated,

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for example, with picking the most likely outcome from a range of possible outcomes, but this does not detract from the fact that the determination of which outcome provides a "win" is to a large extent random, and beyond the control of the punter.

5   Similarly, whilst in most skill based games there is usually an element of chance - for example in determining the challenge to be presented to a player - it is nevertheless the case that the ultimate achievement of a "win" will depend upon the skill of the punter playing the game.

Both of these gaming genres are often described as being "addictive", 10   but for very different reasons. Skill based games, such as the aforementioned console action games, tend to provide punters with an opportunity to test their skill against another punter or indeed against a virtual punter controlled by the console. It is this challenge, as well as the enjoyment to be had from playing the game, which induces the punters to keep playing a given game.

15   Chance based games, on the other hand, have traditionally been associated with gambling in one form or another, and it is often the case that a principal inducement for players to keep playing is the potential for winning - typically in return for a modest stake - a relatively large jackpot prize. Referring to the example of roulette, whilst it is undoubtedly the case that it is 20   exciting to play the game, a principal draw for a punter is the opportunity to significantly increase whatever stake that punter chooses to place on the table. Another example of a chance based game is the so-called one-armed bandit machine. Punters playing these machines do undoubtedly enjoy the experience, but as mentioned above a principal attraction of the machine is 25   that it provides the punters with an opportunity to win a sum of money that is considerably larger than the stake they have had to place to play.

An advantage of chance based games, particularly those played for monetary return, is that the potential for winning money will continue to be a draw for the punters irrespective of the age of the gaming system or the 30   number of times they have played the game.

In the case of skill based games, however, punters can quickly lose interest in the game - for example if the challenges are not sufficiently

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difficult, or are too difficult. It is not unusual for punters to complain that a given game has become "boring" - often because they have become so skilled at playing the game that it no longer offers a challenge. In an amusement arcade that typically includes a number of arcade machines running skill and chance based games, a machine with a skill based game that has become "boring" occupies valuable floor space which could be occupied by a new machine (with a new game) that has a greater potential for contributing to the financial well-being of the arcade.

To counteract the boredom factor, it is usual for managers of amusement arcades to routinely replace the machines in their arcades, and as skill based arcade machines suffer to a greater extent from the boredom factor they tend to be replaced more often than chance based arcade machines.

Replacing one gaming machine with another is an expensive process (as typically the machines are on hire), to say nothing of the inconvenience and expense associated with regularly having to move machines into and out of the arcade.

This problem is also faced outside of the arcade in the home environment, for example in association with computer based gaming systems and console based gaming systems. Specifically, it is difficult to maintain the punters' interest in a given skilled based game once they have either decided that the game is too difficult, or have mastered the game to the extent where it no longer presents a challenge. From a punter's perspective, if they should lose interest in a given game then their only real option is to obtain or purchase another game, and from the game manufacturers' point of view this can cause problems if the punter starts to believe that particular types of games or games from a particular manufacturer are less interesting than others.

It would be an advantage, therefore, if a gaming system could be constructed which avoided these problems. Specifically, it would be advantageous if a gaming system could be constructed that provided the opportunity for punters to play games, particularly skill based games, that are less likely to suffer, or alternatively to suffer to a lesser extent, from the

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aforementioned "boredom factor".

Summary of the Invention

An aim of the present invention is to provide a practical and technical implementation of just such a gaming system, and with this aim in mind a first aspect of the invention provides a gaming system comprising: means configured to establish a trail comprised of a succession of trail elements of which at least some are associated with a prize, progression from one element to another along said trail being dependent upon the completion of tasks by a punter in the course of playing a game; means for determining, at the outset of a said game, the trail element to which the punter could progress in the course of playing the game; and means for controlling the provision of tasks for completion by the punter in the course of the game, said controlling means being configured to ensure that the punter is not provided with a number of tasks that, if completed, would enable the punter to progress to a trail element beyond that which the punter has been predetermined by said determining means to attain.

Another aspect of the invention provides a gaming system comprising: means configured to establish a trail comprised of a succession of trail elements of which at least some are associated with a prize, progression from one element to another along said trail being dependent upon the completion of tasks by a punter in the course of playing a game; means for determining, at the outset of a said game, the trail element to which the punter could progress in the course of playing the game; and means for controlling the provision of tasks for completion by the punter in the course of the game, said controlling means being configured to ensure that the punter is provided with a number of tasks that, if completed, would enable the punter only to progress to a trail element which is the same as that which the punter has been predetermined by said determining means to attain.

Another aspect of the invention pertains to a method of playing a game comprising the steps of: establishing a trail comprised of a succession of trail elements of which at least one or more are associated with a prize, progression from one element to another along said trail being dependent

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upon the completion of tasks by a punter in the course of playing a game; determining, at the outset of a said game, the trail element to which the punter could progress in the course of playing the game; and controlling the provision of tasks for completion by the punter in the course of the game, said controlling means being configured to ensure that the punter is not provided with a number of tasks that, if completed, would enable the punter to progress to a trail element beyond that which the punter has been predetermined by said determining means to attain.

In general terms, the gaming system of the invention is configured to predetermine the trail element the punter could attain in the course of playing a game, and to never provide the punter with a number of tasks that, if completed, would enable them to progress to a trail element which is beyond that which the punter has been predetermined to attain.

In this way, the gaming system of the invention effectively instils an element of chance in the game, which in the preferred embodiment is a skills based game, and thereby helps maintain the punters' interest in playing the game.

Other aspects of the invention, and preferred features of those aspects, are set out in the claims and elsewhere in this description.

Brief Description of the Drawings

Preferred embodiments of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Fig. 1 is a schematic representation of elements of a network of computing resources;

Fig. 2 is a schematic representation of elements of one of the computing resources of Figure 1;

Fig. 3 is a block diagram illustrating programs present in memory of the computing resource of Fig. 2;

Fig. 4 is a schematic diagram of illustrative signalling that occurs in this embodiment of the invention;

Figs. 5a and 5b are screen-shots of illustrative skills-based games;

Figs. 6 to 9 constitute a flow diagram of the various events that occur

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in the course of a game;

Figs 10a and 10b illustrate variations of the flow diagram of Figs. 6 to 9; and

Fig. 11 is a schematic illustration of an arcade machine.

Detailed Description of Preferred Embodiments

To alleviate the aforementioned problems the core concept embodied by the system of the present invention provides punters with the means to play games (particularly skill-based games) that include the opportunity for real or virtual monetary return (for example in the form of cash or credit) on accomplishment of certain tasks or challenges in the game. An advantage of such a system is that the opportunity for monetary return, whether real or virtual, helps stave off the boredom factor associated with traditional skill based games.

The teachings of the invention will now be described with particular reference to a gaming system that is implemented in the form of a game server with which punters can communicate via their computers, for example over an internet, for playing a game. It will be appreciated, however, that this description is only illustrative of the teachings of the invention. The gaming system of the invention could be implemented by a different kind of computing resource connecting over a different type of network to a game server. For example, it is conceivable for punters to play the game on some other type of computing resource such as a mobile telephone, personal digital assistant, an interactive television system (terrestrial or satellite) or indeed on a gaming console (such as a Playstation™ or Gamecube™). It is also conceivable that the teachings of the invention could be implemented by means of a standalone gaming console of the aforementioned "arcade machine" type.

Illustrative Description of the Hardware

There now follows an illustrative description of the hardware that might be used to implement one embodiment of the invention.

Fig. 1 is a schematic representation of a plurality of computing resources 10 (in this case personal computers) that are capable of

communicating with a web server 12 via, in this particular arrangement, an Internet 11. This particular arrangement has been chosen for simplicity, but it will be apparent that as an alternative, or as an addition, to an Internet, some or all of the computing resources 10 could connect to the web server 12 by

5   means of an Intranet, a LAN or WAN, peer-to-peer connections or by any other means. Typically, each computing resource is used by a punter to provide access to a game run by the web server.

Fig. 2 is a schematic representation of an illustrative computing resource 10. The resource 10 comprises a central processing unit (CPU) 14, a

10   memory 16, a disc drive 18, a visual display unit (VDU) 20, a keyboard 22, and a communications port 24, coupled to communications channel 26 (such as an ADSL or ISDN link). These elements are interconnected via a conventional bus structure (not shown). Other elements, such as a mouse, will also most probably be provided.

15   Referring to Fig. 3, within the memory 16 of the computing resource, a plurality of control programs are stored for execution. As shown, these comprise an operating system 28, such as Windows NT or Windows XP ("Windows" being a trademark of Microsoft Corporation), a communications protocol stack 30 such as TCP/IP, and a Java Virtual Machine 32 typically

20   executable as an applet within a web browser 34 such as Internet Explorer. The Java Virtual Machine 32 and web browser 34 collectively comprise an operating environment (labelled collectively as 36) for the gaming system of the invention.

In the particular arrangement shown in Fig. 2, the punters can connect

25   to the web server 12 by entering the URL of a web page maintained by the server into their respective operating environments 36. Once connected to the server, users can (by manipulating the GUI) download Java applets as required for local execution. At the server end of the system, the web server 12 comprises a store for the applets, and software for retrieving and

30   distributing applets in response to requests from users.

As an alternative to, or indeed in addition to, the use of applets, the gaming system of the invention may instead be implemented by means of a

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multimedia browser plug-in, such as Macromedia Flash for example. Implementing the invention in this way can reduce the amount of information that needs to be downloaded from the server to the computing resource 10, and hence can speed the process.

5   Overview of Preferred Embodiment

In the preferred embodiment of the present invention, the gaming system exists in a virtual environment which may be maintained by a single computing resource or a number of different computing resources. Punters can connect to the environment, place wagers to start playing a game, play the

10   game and, if successful, collect any monetary return. Details of some illustrative games will be explained later. At this juncture it is sufficient merely to state that the teachings of the invention are particularly well suited to games of the skill-based type, which are often colloquially referred to as "arcade games". In a highly preferred implementation, the environment

15   mimics, in so far as it is possible, an amusement arcade.

In an envisaged scenario, punters using computing resources at disparate physical locations can connect via an internet, for example, to the web server 12. Applets, for example Java™ applets, downloaded from the web server to the browsers running on each of the punter's computing

20   resources provide the front end (i.e. the punter's end) functionality of the gaming system, and the server provides the back end functionality of the system.

The system is implemented, in this example, so that each punter competes against the server in the game of their choice. In an alternative

25   arrangement, the punters could compete against one another in a game run by the server, and in such an implementation the server would be arranged to ensure that changes made at any given point in the system (such as a punter completing a particular task) are reflected in all other parts of the system.

In the present implementation, changes in the game being played by

30   the punter are referred back to the server at appropriate point(s) in the proceedings. For example, if the punter should lose a "life" in the course of a game, then a message would be sent back to the server, and the server would

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update the number of lives attributed to that punter for the game being played.

To become a punter (i.e. a participant in the gaming system of this embodiment) a user types the URL of the web server 12 into the web browser running on their computer. A home page is then downloaded from the web
5   server 12 to the punter's computer, and the user can interact with this web page by means of the keyboard (and other input device(s)) connected to their computer.

Typically, the home page of the gaming system will include various different radio buttons that can be clicked on by the user to travel from the
10   home page to subsequent web pages associated with each of the radio buttons. One of the radio buttons is a registration button which, when clicked is operable to open a secure link to the web server 12, so that a punter can register with the web server and purchase (by means of a credit card for example) game tokens or cash credit so that a game can be played. To
15   maintain the feel of an amusement arcade, the registration pages may take the form of a representation of an arcade cashier's office.

Once registration has been completed satisfactorily, the punter is returned to the home page, and the software running on the punter's computer is updated to indicate the amount of game tokens or cash credit purchased,
20   and the registration details of that punter. The punter can then click on another radio button to proceed into the "amusement arcade" proper.

In the preferred embodiment, registration is a one-time process required only for those users who have not previously played the game. Users returning to the web site for a second or subsequent game may "login" to the
25   web site by entering a username and an associated password. In a highly preferred embodiment, designed particularly with security in mind, registration details are configured to expire if a given punter has not visited the web site for a predetermined period of time. This embodiment has the additional advantage of avoiding having to store registration details for
30   punters who are no longer interested in playing the game.

When the punter clicks on the radio button to proceed to the "amusement arcade" proper, a "lobby" web page is loaded which provides the

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punter with a choice as to the type of game he would like to play. Typically, the punter will be provided with a visual indication of a plurality of games, represented for example in the form of arcade games, and the punter can choose which of these games they would like to play. Depending on
5   bandwidth constraints, the gaming system can be configured to display a description of the game and the prizes available when a punter moves their mouse, for example, over one of the arcade games in the lobby area. Alternatively, the system could be configured so that a punter has first to click on a particular arcade game representation before details of that game are
10   displayed.

In the envisaged implementation, each representation of an arcade game will include a radio button, labelled "play game" or similar, and a user clicking on this button will be taken to an introductory web page dedicated to that game. The introductory page may include options for selection by the
15   punter prior to commencing game play proper. Such options could include, for example, a selection of a number of different cash trails that the punter could opt to follow, each successive cash trail typically offering the potential for a higher monetary return than the preceding cash trail in exchange for a greater entrance fee.

20   As will hereafter be described in detail, a cash trail is comprised of a series of trail elements and the punter can progress from one element to another along the trail on completion of certain tasks or challenged presented to the punter in the course of a game. For example, the punter may be challenged to collect tokens in the course of the game, each token collected
25   being sufficient to advance the punter one element along the trail. In the preferred embodiment, the trail starts at zero and terminates at 16. As the punter moves along the trail, so the cash (or equivalent) prize they can win increases. In the preferred implementation, three trails are provided (each having a greater entrance fee, and a greater jackpot) and each trail comprises
30   five prize bands, as shown below in Table 1.

Table 1

Prize Band	Entrance Fee (£)	Prize (£)	Entrance Fee (£)	Prize (£)	Entrance Fee (£)	Prize (£)
0-3 elements	0.20	0	0.50	0	1.00	0
4-7 elements		0.20		0.50		1.00
8-11 elements		0.50		1.25		2.50
12-15 elements		1.00		2.50		5.00
16 elements		1,000		2,500		5,000

In this particular implementation the "jackpot" (won when a punter moves to the last element of the trail) is fixed for the particular fee paid to play the game. In another arrangement, to be described later, the jackpot is a progressive jackpot that increases as games are played.

Once the punter has chosen the cash trail they wish to attempt to follow, the entrance fee (in the form of cash or credit) is debited from the cash or credit amount purchased by the punter on registration. The game applet is then downloaded from the server for local execution on the punter's computing resource. Game play proper can then commence with messages being sent back to the server at appropriate point(s) in the proceedings.

As an alternative to applets, the games (and/or other parts of this embodiment) may instead be implemented by means of multimedia software such as Macromedia Flash or equivalent. Multimedia software of this ilk, as is well known in the art, differs from applet based software in that the core multimedia software (the flash viewer) is resident as a browser plug-in at the host computing resource, and only the multimedia content is downloaded as required. Applet based software, in contrast, functions on the basis that the software itself is downloaded for local execution.

System Messaging

Fig. 4 is a schematic diagram of illustrative signalling that occurs in this embodiment of the invention.

Prior to beginning a game, a punter (having navigated to the home

page in the manner described above) selects the game that they wish to play and the cash trail that they wish to follow (Step 40). A message is sent from the punter terminal 10 to the game server 12 which identifies both the game and the trail that the punter has selected. On receipt of the message, the server 12 retrieves the appropriate game applet from the applet store and forwards it to the punter terminal for local execution (Step 42).

Once the game has loaded (Step 44), and the punter has indicated that they wish to play (Step 46), a message is sent to the server 12 indicating that the game is about to start (Step 48). On receipt of this message, the server 12 determines the maximum position on the selected cash trail that the punter could possibly attain by completing tasks in the course of the game and identifies the corresponding prize, if any (Step 50). The server then generates a win or lose code, as appropriate (Step 52), and sends a message including that code to the punter terminal. The punter terminal is updated on receipt of the message (Step 54) without advising the punter, and the punter can proceed to play the game (Step 56).

As will hereafter be explained in detail, the games will typically comprise a number of levels, and if the punter should complete a level the difficultly of the game will increase. The punter will be provided with a number of "lives", and the game will terminate (Step 58) if all of those lives should be lost in the course of the game.

The game starts at the lowest skill level, and in the course of the game the punter will be provided with a number of tasks or challenges for completion which is appropriate for the win or lose code previously received. The punter will then continue to play the game, completing tasks or challenges and levels as they progress through the game (Step 60). At this juncture it is worth noting that the punter is never provided with a number of challenges that, if completed, would enable them to progress to qualify to a prize larger than that associated with the win code previously received.

The game continues until either all of the punter's lives have been lost or until all of the levels have been completed, or until the punter has decided to opt out of the game (several opt-out opportunities being provided to the

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punter).

If, on completion of the levels or on opt-out, the punter has completed sufficient tasks or challenges to progress to a winning prize band, then a win is determined to have occurred (Step 62). As will later be described in detail, the magnitude of the win may not be as large as the predetermined win code first indicated. For example, the win code might have indicated that the punter could complete sufficient tasks to qualify for the jackpot, but if the punter should complete insufficient tasks to qualify for the jackpot then they will receive a smaller prize.

If the punter should lose all their lives or fail to complete sufficient challenges to progress to a winning prize band, then a lose is determined to have occurred (Step 58), and they are returned to the start of the process (Step 40).

Although not shown in Fig. 4, the punter terminal will - typically at the end of a level or in the event of a life being lost - send a message to the server which updates the server as to progress of the game. This feature allows for a part completed game to be recovered in the event that the communications link between the punter terminal and game server should be severed at some point in the proceedings.

If the punter should win the game (Step 62), a win code is generated (Step 64) and sent to the game server. The game server, on receipt of the win code will attempt to credit the punter's account (Step 66), and if successful will send a win confirmation to the punter terminal (Step 68).

The punter terminal waits for receipt of the win confirmation (Step 70), and if after a predetermined period of time no confirmation is forthcoming (Step 72) the punter terminal displays an error message (Step 74) which includes the aforementioned win code. The punter can then e-mail, for example, the win code to the game server, and the server on receipt of the e-mail checks the code (Step 76) before crediting the punter's account (Step 78).

If win confirmation should be forthcoming, the punter terminal confirms to the punter (Step 80) that a win confirmation has been received, before advising the punter that the game is over and offering an opportunity to

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play another game (Step 82). If the punter should choose to play another game, the process resets to step 40 aforementioned.

Overview of various games

As mentioned above, the teachings of the present invention are particularly well suited for skill based games, such as for example so-called arcade games.

A screen shot of one such arcade game, known as "Snake Escape", is illustrated in Fig. 5a.

This game is a modification of the existing, and well known, so-called "centipede" game where a player must guide a "snake" 84 round a gaming arena 86 in such a way that the snake does not touch the sides of the arena, and does not run into its own body. Typically the snake will gradually grow in length and/or move more quickly as the game progresses, thereby making it harder to successfully guide the snake around the arena.

In this modification of the game, various icons 88 are displayed to the punter, and if the punter should manage to guide the snake over the icons then various special features of the game will come into play. For example, the game may randomly insert icons into the gaming arena that, if collected, will cause the snake to increase or decrease by one unit in length, or to speed up or slow down. In addition, the game will introduce golden tokens which, if collected, will cause the punter to move to the next adjacent trail element of the selected cash trail.

A screen shot of another arcade game, known as "Cash Break", is illustrated in Fig. 5b.

This game is a modification of the existing, and well known, so-called "breakout" game where a player moves a bat 90 to bounce a ball 92 against a wall 94, bricks 96 in the wall being destroyed when they are hit by the ball 92.

In this modification of the existing game, a variety of different types of bricks can be displayed which, when destroyed, will have a number of different effects. For example, certain bricks can be configured as being "particle bricks" which will explode on contact with the ball thereby destroying bricks adjacent to that which was hit by the ball. Other bricks are

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arranged, when destroyed, to release icons that on collection by the player turn the bat into a gun turret which can be controlled to shoot at bricks to destroy them. Yet further bricks may, when destroyed, release golden tokens which, when collected by the punter, advance the punter one step along the cash trail.

Another game for which the teachings of the invention are well suited is a variant on the existing "Lemmings" game. In this modification, golden balls are released into the gaming arena, and a player who is able to safely guide a golden ball from one side of the screen to the other will be advanced one element along the cash trail.

Another game well suited for implementing the teachings of the invention is similar in concept to "Tetris". In this game, golden balls are randomly dropped into the gaming arena, and a punter who successfully links five such balls advances one element along the cash trail.

Many other suitable games will be apparent to those persons of skill in the art.

Detailed explanation of game mechanics

Figs. 6 to 9 constitute a flow diagram of the various events that occur in the course of a game. In this particular embodiment, each trail comprises (as shown in Table 1) four prize bands, and one lose band. The lose band starts at trail element 0 and extends to trail element 3, the first prize band starts at trail element 4 and extends to trail element 7. The second prize band starts at trail element 8 and extends to trail element 11, the third prize band starts at trail element 12 and extends to trail element 15, and the final prize band (the jackpot prize) starts and finishes at trail element 16.

In this embodiment, the punter is tasked with collecting tokens to progress from one trail element to another, and at the start of a given game the number of tokens collected in any one level of the game (TokensCollected) is set to zero. The punter is allocated three "lives", and the start element for each prize band (PrizeBandStartElement) is set to 4, 8, 12 and 16 respectively.

Starting with Fig. 6, the first event that occurs (Step 100) is the selection, by the punter, of the particular trail that they wish to attempt to

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follow, and hence the jackpot prize that they wish to compete for.

Once the trail has been chosen, a random number generator of the game server 12 is configured to generate a random (or at least substantially random) number from 0 to 16 (Step 102). This number, known as MaxElement, represents the maximum trail element that the punter could potentially progress to if they were to collect all of the tokens allocated to them (it being understood, of course, that the punter may not actually progress to this point in the trail).

The game server then determines (Step 104) whether MaxElement is less than four. If MaxElement is less than four, then a "lose" is determined to occur, a lose code message is sent back to the punter terminal, and the process continues in Fig. 7. If MaxElement is equal to four or more, then a "win" is determined to occur, a win code message is sent back to the punter terminal, and the process continues in Fig. 8.

Referring now to the "lose" scenario depicted in Fig. 7, once the lose determination has been made the first level of the game can commence (Step 106). The punter terminal (or indeed the server terminal) then proceeds to generate a random, or at least substantially random, number (labelled TokenAward) from zero to 3 which defines the number of tokens that will be provided to the punter for collection in this level (Step 108).

As will be explained in detail later, the provision of a maximum of only three tokens prevents the punter from ever progressing beyond the third trail element in a round, and as such prevents the punter from ever progressing to the first prize band. In an alternative arrangement, the punter may be shown more than the number of tokens needed to progress to the prize band, but those tokens may be provided in such a way that the punter is not actually able to collect more than three of them.

Once the number of tokens to be provided has been determined, game play proper can commence (Step 110). As the punter plays this level of the game, the number of tokens set by TokenAward is provided for collection. Each time a token is collected by the punter, the variable TokensCollected is incremented by one. The punter terminal also checks to see whether a life has

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been lost by the punter (Step 112), and whether the level has been completed (Step 114).

If a life has been lost, the punter terminal reduces the variable "life" by one (Step 116), and sends a message to the server terminal to inform the server of the new value of the variable "life". A check is then made to see whether the variable "life" is equal to zero (Step 118), and if it is equal to zero the game ends.

If the variable "life" is not equal to zero, the variable TokensCollected is reset to zero (Step 120) and the game reverts back to the start of the level. Resetting the TokensCollected variable to zero ensures that the punter is prevented from collecting more than three tokens spread over several levels. As mentioned above, in this instance TokenAward can only ever be a maximum of three, and as such the punter is prevented from collecting the four tokens they would need to progress to the first prize band.

If the punter should complete the level, the number of tokens collected (TokensCollected) is displayed to the punter (Step 122), and then subsequently reset to zero (Step 124). The game level is then incremented to increase the difficulty of the game (Step 126), and processing returns to step 106 aforementioned. This process continues until the variable "Life" is equal to zero, whereupon the game terminates. As with the scenario above, resetting TokensCollected to zero ensures that the punter can never collect sufficient tokens to qualify for a prize.

Referring now to the "win" scenario depicted in Fig. 8, once the win determination has been made the first level of the game can commence (Step 128). The punter terminal (or indeed the server terminal) then proceeds to generate a random, or at least substantially random, number (labelled TokenAward) from zero to 7 which defines the number of tokens that will be provided to the punter for collection in this level (Step 130). As will be appreciated by those persons skilled in the art, the provision of a maximum of seven tokens ensures that the punter can only progress, in any one level, from one prize band to the next adjacent prize band.

Once the number of tokens to be provided has been determined, game

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play proper can commence (Step 132). As the punter plays this level of the game, the number of tokens set by TokenAward is provided for collection. Each time a token is collected by the punter, the variable TokensCollected is incremented by one. The punter terminal also checks to see whether a life has been lost by the punter (Step 134), and whether the level has been completed (Step 136).

If a life has been lost, the punter terminal reduces the variable "life" by one (Step 138), and sends a message to the server terminal to inform the server of the new value of the variable "life". A check is then made to see whether the variable "life" is equal to zero (Step 140), and if it is equal to zero the game ends.

If the variable "life" is not equal to zero, the variable TokensCollected is reset to the value it had when the level commenced (Step 142). Referring now to Fig. 9, and following reset of TokensCollected, a determination is made as to whether TokensCollected is in the same prize band as MaxElement (Step 144). If TokensCollected *is* in the same prize band as MaxElement, then TokenAward (i.e. the number of tokens to be awarded for collection in this round) is set to a randomly generated (or at least substantially randomly generated) number from 0 to 3 (Step 146), and the level (in which the punter previously lost a life) starts again (Step 148). Processing then continues at Step 132 of Fig. 8. If, on the other hand, TokensCollected is *not* in the same prize band as MaxElement, then processing reverts to Step 130 of Fig. 8 and TokenAward is set to a randomly generated (or at least substantially randomly generated) number from 0 to 7.

Steps 142 and 144 ensure that a punter who has collected sufficient tokens to progress to a prize band, never receives sufficient tokens to progress beyond the prize band in which MaxElement falls. As will be appreciated, a punter who has progressed to the prize band in which MaxElement falls will continue to be supplied with tokens at each level of the game, but not enough tokens to progress to the next prize band.

If a punter should be determined in Step 136 (Fig. 8) to have completed a level, it is subsequently determined whether the number of

tokens collected in that level is sufficient to progress to the next PrizeBandStartElement (Step 150). For example, a punter who is on the fourth trail element (following previous levels), and who collects three further tokens in this level would have seven tokens in total. Seven tokens is less than the number required to progress to the next prize band (eight tokens), and hence this determination would be negative. Conversely, a punter who is on the fourth trail element (following previous levels), and who collects five further tokens in this level would have nine tokens in total. Nine tokens is greater than the number required to progress to the next prize band (eight tokens), and hence this determination would be positive.

If the punter has collected sufficient tokens to progress to the next prize band, the prize won by the punter is incremented to that of the next prize band (Step 152) (n.b. a message may be sent to the server at this juncture to advise the server of the current prize awarded to the punter), and subsequently a determination is made as to whether the prize won is the jackpot (Step 154). If this determination is positive (i.e. the prize won is the jackpot), the prize is paid to the punter (Step 156) and the game terminates.

If the prize won is not the jackpot, the punter is provided with the opportunity to cash-out (i.e. collect their prize) or to continue in the hope of winning a larger prize (Step 158).

If the punter should opt to cash-out, then the prize is paid to the punter (Step 156) and the game terminates. If the punter should opt to continue, the level is incremented (to increase the difficulty of the game) (Step 160), and the variable TokensCollected is reset to the nearest lower PrizeBandStartElement (Step 162). For example for the punter described above who has collected nine tokens, the variable TokensCollected would be reset to eight - eight being the nearest PrizeBandStartElement to the punter's current position (i.e. the ninth element) on the trail. Similarly, for the other punter described above who has collected seven tokens, the variable TokensCollected would be reset to four tokens.

Of note is the fact that once a given prize level has been attained, it is not subsequently possible to drop to a lower prize level. Thus, a punter who

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collects four tokens, and is subsequently unable to collect any further tokens would not cease to qualify for a prize. However, punters must - when deciding whether or not to continue at Step 158 - bear in mind that if they should lose all their lives, then they will lose any prize for which they have previously qualified. Given that the difficulty of each level increases, the decision to continue playing the game is not without risk.

Incidentally, it is likely that in order to comply with current legislation, in the UK at least, the Punter will need to be advised that they will lose any tokens collected in the course of a level that do not allow them to progress to the next prize band. This can be accomplished at the start of the game or alternatively when the punter is provided with an opportunity to cash-out (Step 158).

Once the variable TokensCollected has been adjusted, processing proceeds to Step 144 as aforementioned.

If, in Step 150, it is determined that the punter has failed to collect sufficient tokens to progress to the next prize band, a determination is made to as to whether the punter already qualifies for any prizes (Step 164). If the punter does already qualify for a prize, then he is provided with an opportunity to cash-out as aforementioned.

Using the abovementioned example of the punter who has collected four tokens in the first round and three tokens in the second round, that punter (having qualified for the first prize band by collecting four tokens) would be offered the opportunity to cash-out and collect the prize associated with the fourth token, as well as the opportunity to continue in the hope of winning further prizes. If the punter should opt to continue, and should fail to collect sufficient tokens to progress further in that and subsequent levels they will be provided, at the end of each level, with the opportunity to cash-out and collect the prize for which they have already qualified.

In this embodiment of the invention, the prize for a punter who has been predetermined to win a prize, but who fails to collect sufficient tokens to attain that prize, is retained by the organisation running the game. An alternative arrangement is described below.

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It will be appreciated, from the above, that the teachings of the invention provide a number of means by which the interest and enthusiasm of the punter can be maintained. For example, a punter who has been predetermined to lose, will still be provided with tokens to collect, and hence will still assume that there is the opportunity to collect a prize even though it has in fact already been determined that no prizes will be forthcoming. Similarly, a punter who has been determined to win a particular prize, but who opts to continue, will continue to be provided tokens for collection, but not enough tokens to enable them to progress to the next prize band. As the punter does not know whether they have been predetermined to win or lose, or indeed the number of tokens that they might receive in any given level, the punter's enthusiasm for a given game can be maintained and this helps allay the aforementioned "boredom factor" associated with traditional games, in particular skill based or arcade games.

In a highly preferred embodiment, the award of tokens can be adjusted to further heighten the sense that the punter has just failed to qualify for the next prize band. For example, a punter who has been predetermined to lose might have a greater chance of getting three tokens in a level, as the levels progress, than zero, one or two tokens. In this way the punter continuously just fails to acquire sufficient tokens to progress.

Similarly, a punter who has been predetermined to win might have a reduced number of tokens provided to them in the initial levels of the game to ensure that the punter must play a few levels before they are ever provided with sufficient tokens to progress to a prize winning point on the trail.

A further advantage of such an arrangement is that a punter who is consistently failing to collect tokens provided (e.g. a punter who is relatively unskilled) can be given a greater chance of being provided with a higher number of tokens (such as two or three tokens (for the 0 to 3 range), or five, six or seven tokens (for the 0 to 7)), than a punter who is consistently collecting the tokens provided. This arrangement ensures that even relatively unskilled punters are provided with the sense of almost having collected sufficient tokens to progress to a prize winning point on the trail.

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Further embodiments

As mentioned above, in the previous embodiment a prize that is uncollected is retained by the organisation running the game.

In a modification of this embodiment, the Jackpot prize (attained by progressing to the last element of the trail) is configured to be a progressive jackpot. By this we mean that the jackpot has the potential, if uncollected, to grow progressively as subsequent punters play the game and fail to collect the prizes they have been predetermined to win - either by virtue of losing all their lives or by virtue of their cashing-out at a trail element prior to that which they have been predetermined to attain.

To provide punters with the opportunity to collect some sort of jackpot it is of course necessary for the organisation running the game to provide a seed amount for the jackpot.

Once this seed amount has been provided a punter who has been predetermined to be capable of winning a prize, but fails to collect that prize by losing all their lives before collecting the required number of tokens, has the pre-allocated prize added to the jackpot seed. Similarly, punters who have been predetermined to be capable of winning a prize from the second or subsequent prize band, for example, but opt to cash-out when they have collected sufficient prize tokens to progress only to the first prize band will have the difference between the prize that they could have won and the prize that they opted to collect added to the jackpot prize.

To implement this functionality as depicted in Fig. 10a, it is necessary to modify the process depicted in Fig. 8 to include a further step 164 where, on a determination being made that Life=0 in Step 140, any uncollected prize (i.e. any prize which the punter has been predetermined to be capable of winning, but has lost all their lives prior to collecting) is transferred to the jackpot.

Similarly, as depicted in Fig. 10b, in the event of a punter opting to cash-out (Step 158), a determination is made as to whether the prize that the punter has opted to collect is equal to the prize (associated with MaxElement) that the punter could potentially have won (Step 166). If the prize to be

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collected is equal to the potential prize, then processing proceeds to Step 156 and the punter is paid. If the prize to be collected is less than the prize that the punter could have won, then the difference between the prize to be collected and the potential prize is transferred to the jackpot (Step 168), and processing

5   continues at Step 156 aforementioned.

Once the jackpot has been collected, as described above, a seed amount is placed in the jackpot and that seed amount is progressively added to as successive punters play the game.

It will be appreciated that this embodiment of the invention provides

10   an opportunity for a punter to win a prize which is at least as much as the seed amount, and in most instances in excess of the seed amount. This feature further enhances the appeal of the gaming system to the punters.

Other modifications

As mentioned above, whilst the teachings of the invention have

15   previously been described with reference to a computing resource connecting to a game server over a communications system such as an internet, it will be appreciated that the teachings of the invention may be applied to a variety of different systems.

For example, the teachings of the invention may be implemented in a

20   portable digital assistant or mobile telephone connecting over a mobile telephone network to a game server, an interactive television system (terrestrial or satellite) or indeed in a games console (such as a Playstation™ or Gamecube™) that is capable of connecting to a games server by means, for example, of the PSTN.

25   A particular preferred arrangement is for the invention to be implemented by means of a terrestrial or satellite interactive television system. Such systems typically already provide the opportunity for punters to play games, and it would be a simple matter to implement the present invention via such a medium. Implementation of such a system would be

30   very similar to that described above for an internet based gaming system, with software being downloaded as required from a remote centre (for example by means of a satellite telecommunications network) for local execution by a set-

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top box connected to the punter's television set.

The teachings of the present invention could also be implemented in an arcade machine, and a schematic representation of one such machine is shown in Fig. 11.

5   As shown, the arcade machine 170 comprises a housing 172, in which a display device 174 (such as a cathode ray tube), one or more punter input devices 176 (such as buttons, keys, a joystick or a trackerball), and the face plate 178 of a coin or token receiving device are mounted (the remainder of the coin or token receiving device being hidden within the machine. A

10   lockable door 180 is provided in the housing 172 to permit access to the innards of the machine, and in particular to a repository 182 (shown in ghost) for deposited coins or tokens which is provided within the machine and is in communication with the coin or token receiving device 178.

A controller is provided, and is operable to execute software that

15   implements the functionality described above in connection with Figs 6 to 10, as well as the functionality ascribed to the game server depicted in Fig. 5 and elsewhere. The controller is also operable to control the display of images to the punter on the aforementioned display screen. As an alternative to software, the teachings of the invention could of course be provided by means

20   of one or more application specific integrated circuits (ASICs).

In addition to the particular components illustrated in Fig. 11, it is likely that further components - known to persons skilled in the art of arcade machine manufacture - will additionally be provided. Those further components have been omitted from the present application for brevity.

25   As further modifications of the teachings of the invention, it will be apparent that the number of elements in a given prize band, the number of prize bands and/or the number of trail elements may be varied at will. Similarly, whilst the use of prize bands is preferred, it is by no means essential, and the teachings of the invention could equally be employed in

30   circumstances where the trail is not split into prize bands.

In summary, it is apparent from the above, that the present invention provides a number of advantages as compared with the gaming systems

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heretofore proposed.

It will also be apparent that modifications may be made to the particular embodiments disclosed herein without departing from the spirit and scope of the invention as hereafter claimed. As such, it should be noted that the scope of the present invention extends to any novel combination or permutation of features herein described, irrespective of whether that particular combination or permutation has been explicitly enumerated in the accompanying claims.